

STATE OF GEORGIA

TMDL IMPLEMENTATION PLAN FOR: Big Slough (STREAM) Dissolved Oxygen (PARAMETER) RIVER BASIN: Flint
PLAN DATE: _____

Prepared by: <u>Southwest Georgia Regional Development Center</u> Address: <u>30 West Broad Street</u> City: <u>Camilla</u> State: <u>GA</u> Zip: <u>31730</u> e-mail: <u>www.swgrdc.org</u> Date Submitted to EPD: <u>09/30/04</u>		Or Prepared By: _____ Address: _____ City: _____ State: _____ Zip: _____ e-mail: _____ Date Submitted to EPD: _____	
General Information Obtain this information from the TMDL document or other information. When completed, this document will be a self-contained report independent of the TMDL document.		Significant Stakeholders Identify local governments, agricultural organizations or significant landholders, commercial forestry organizations, businesses and industries, and local organizations including environmental groups with a major interest in this water body.	
TMDL ID (to be entered by EPD)		Name/Organization	Mitchell County Board of Commissioners
Water body name	Big Slough	Address	P.O. Box 187
HUC basin name	Flint	City	Camilla State GA Zip 31730
HUC number	0313000805	Phone	(229) 336-2000 E-mail
Primary county	Mitchell	Name/Organization	Mitchell County Health Department
Secondary county	N/A	Address	88 West Oakland Ave.
Primary RDC	Southwest Georgia	City	Camilla State GA Zip 31730
Secondary RDC	N/A	Phone	(229) 336-2055 E-mail
Water body location	Tributary from Camilla along Hwy 97 South	Name/Organization	City of Camilla
		Address	P.O.Box 328
Miles or area impacted	4 miles	City	Camilla State GA Zip 31730
Parameter addressed in plan	Dissolved Oxygen	Phone	(229) 336 - 2220 E-mail
Water use classification	Fishing	Name/Organization	NRCS
Degree of impairment	Partially supporting use	Address	1479-B US 19 South
	Not supporting use X	City	Leesburg State GA Zip 31763
Date TMDL approved by EPA	2/19/1998	Phone	229-883-5597 E-mail
Impairment due to	Point sources <input type="checkbox"/>	Name/Organization	
	Nonpoint sources X	Address	
	Both <input type="checkbox"/>	City	State Zip
Point source-Form A; Nonpoint source-Form B; Both-Form A+B+C		Phone	E-mail

If more, add to comments on last page.

FORM B

SUMMARY OF ALLOCATION MODEL RESULTS FROM TMDL DOCUMENT (existing load, target TMDL, and needed reduction)

EXISTING LOAD	TARGET TMDL	NEEDED REDUCTION
351	234	33 %

I. IDENTIFY **POTENTIAL NON-POINT SOURCE** CATEGORIES AND SUBCATEGORIES OR INDIVIDUAL SOURCES WHICH MUST BE CONTROLLED TO IMPLEMENT LOAD ALLOCATIONS:

List major non-point sources **potentially** contributing to impairment including those identified in TMDL document.

POTENTIAL SOURCE	DESCRIPTION OF POTENTIAL CONTRIBUTION TO IMPAIRMENT	RECOMMENDED LOAD REDUCTION (FROM TMDL)
Urban Land Uses	Urban Storm Water Run-off	
Residential Land Uses	Leaking Septic Tanks, Animal Waste, Leaking Sewer Lines	
Public Land Uses	<p>There is very little public land within the Big Slough Drainage Area. First and foremost, it's important to recognise that Big Slough is less obviously a stream per se, (one with clearly defined boundaries and fast flowing water) but rather a slow moving column of water that on the surface reveals itself as a procession of wetlands, marsh areas and small pools.</p> <p>The existing land is used primarily for Row Crop Agriculture, (48.7 %) Evergreen Forestry, (16.12 %), Pasture/hay, (14.76 %) and woody Wetlands, (5.20 %). Given Row Crop Agriculture contributes 92 % of stream borne sediment, it's reasonable to assume that a portion of this sediment will join with the omnipresent leaf litterfall to create high levels of Sediment Oxygen Demand on the slow moving stream floor.</p> <p>Slow moving water, especially when combined with high levels of organic sediment, and high temperatures consistently display low levels of dissolved oxygen.</p>	
Municipal Uses		33 % Total all

		categories
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II. DESCRIBE ANY REGULATORY OR VOLUNTARY ACTIONS INCLUDING MANAGEMENT MEASURES OR OTHER CONTROLS BY GOVERNMENTS OR INDIVIDUALS THAT SPECIFICALLY APPLY TO THE POLLUTANT AND THE WATERBODY FOR WHICH THE TMDL WAS WRITTEN, THAT WILL BE ACCOMPLISHED THROUGH RELIABLE AND EFFECTIVE DELIVERY MECHANISMS, AND THAT WILL HELP ACHIEVE THE LOAD ALLOCATIONS IN THE TMDL:

See the attachment for more instructions.

EXISTING OR REQUIRED REGULATORY ACTIONS

RESPONSIBLE GOVERNMENT, ORGANIZATION OR ENTITY	NAME OF REGULATION /ORDINANCE	DESCRIPTION	ENACTED OR PROJECTED DATE (mm/yy)	STATUS
Mitchell County Health Dept.	Sanitary Code	Installation of on-site sewerage systems	1970's	In-force
Mitchell County	Zoning Ordinance	Land Use Regulations	2000	In-force
Mitchell County	State of Georgia Soil & Sedimentation Control Act	Construction code to reduce pollutants to navigable waters	1980's	In-force
City of Camilla	Zoning Ordinance	Land Use Regulations	1990's	In-force
City of Camilla	State of Georgia Soil & Sedimentation Control Act	Construction code to reduce pollutants to navigable waters	1980's	In-force

Mitchell County	Local Wetlands Policy Ordinance	Georgia Planning Act Part V: Environmental Criteria. This ordinance regulates development of areas designated as wetlands as defined by the U.S. Army Corps of Engineers as jurisdictional wetlands.	2001	In-force
Mitchell County	Floodplain Management Ordinance	100 year / 500 year flood levels are shown on FEMA flood maps	2001	In-force
City of Camilla	Local Wetlands Policy Ordinance	Georgia Planning Act Part V: Environmental Criteria. This ordinance regulates development of areas designated as wetlands as defined by the U.S. Army Corps of Engineers as jurisdictional wetlands.	2001	In-force
City of Camilla	Floodplain Management Ordinance	100 year / 500 year flood levels are shown on FEMA flood maps	2001	In-force

EXISTING VOLUNTARY ACTIONS

RESPONSIBLE ORGANIZATION OR ENTITY	NAME OF ACTION	DESCRIPTION	ENACTED OR PROJECTED DATE (mm/yy)	STATUS
Forestry and Agricultural Stakeholders	Best Management Practices	Soil and Sedimentation Control Ordinance	Ongoing	Ongoing

Mitchell County	Big Slough Water Quality Incentive Project	Grants to concentrate on ground water degradation	1997-2000	Ongoing
Mitchell County	Code Enforcement Officer	The Code Enforcement Officer has the authority to write citations, fine, and take to Magistrate Court if someone is found to be in violation.	2000	Current
City of Camilla	Code Enforcement Officer	The Code Enforcement Officer has the authority to write citations, fine, and take to Municipal Court if someone is found to be in violation.	1980's	Current

Note: All organizations listed in tables are considered stakeholders.

Additional recommended regulatory or other measures, which should be implemented to reduce the loads of the TMDL parameter

ENTITY/ORGANIZATION RESPONSIBLE	NAME OF PROPOSED REGULATION/ORDINANCE/ OTHER	DESCRIPTION	ENACTED OR PROJECTED DATE (mm/yy)	STATUS
Mitchell County / City of Camilla	Periodic Monitoring	Monitor impaired stream segments for Dissolved Oxygen	2002	Pending Funding
Flint River Basin Management Plan	Water Quality Management Plan Part V Groundwater Recharge	Implement regulatory/voluntary activities to meet water quality goals	2005	Ongoing

III. SCHEDULE FOR IMPLEMENTING MANAGEMENT MEASURES OR OTHER CONTROL ACTIONS:

These must be implemented as expeditiously as practicable within five years of when the implementation plan is accepted by EPA.

IMPLEMENTATION ACTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Form stakeholders group	X				
Organize implementation work with stakeholders and local officials to identify remedial measures and potential funding sources	X	X			
Identify sources of TMDL parameter	X				
Develop management programs to control runoff including identification and implementation of BMPs (Phase I):	X	X			
Agriculture					
Forestry					
Urban	X	X			
Mining					
Organize and implement education and outreach programs	X	X	X		
Detect and eliminate illicit discharges					
Evaluate additional management controls needed			X	X	X
Monitor and evaluate results		X		X	
Reassess TMDL allocations				X	X
Provide periodic status reports on implementation of remedial activities			X		X
If needed, begin process for Phase II (next 5 years) and subsequent phases					

IV. PROJECTED ATTAINMENT DATE AND BASIS FOR THAT PROJECTION:

The projected attainment date is 10 years from acceptance of the implementation plan by EPA.

V. MEASURABLE MILESTONES:

- Number of management controls and activities already implemented 4
- Number of management controls and activities proposed in five-year work program 2
- Number of management controls and activities actually implemented in five-year work period _____ (to be completed after 5 years)
- Stream sampled to identify areas of concern See monitoring plan
- Other _____ _____
- Other _____ _____

VI. MONITORING PLAN:

Monitoring data that placed stream on 303(d) list will be provided if requested.

Describe previous or current sampling activities or other surveys to detect sources or to measure effectiveness of management measures or other controls.

ORGANIZATION	TIME FRAME	PARAMETERS	PURPOSE	STATUS
Georgia EPD/County	As soon as possible	Dissolved Oxygen	Determine if Dissolved Oxygen levels still warrant listing the branch on the 303(d) list	Funding for monitoring must be identified
Georgia EPD/County	If additional monitoring determines D.O. levels exceed limits	Dissolved Oxygen	Monitor branch at several different points to identify source of contamination. Implement necessary measures to decrease F.C. load	Needs to be done if stream is not de-listed; Funding must be identified.
Georgia EPD/County	After sources are determined and measures to abate are implemented	Dissolved Oxygen	Periodic monitoring to determine if implemented measures are successful	Needs to be done if stream is not de-listed; Funding must be identified.
The City of Camilla's Wastewater Treatment Complex	Continuous	Fecal Coliform, Flow, Biochemical Oxygen	New Wastewater Treatment process is a land application system that does	Continuous

		Demand, Ammonia, Total Residual Chlorine, pH, Dissolved Oxygen, Temperature, etc.	not drain into Big Slough. However, the city monitors plant for aforementioned pollutants to avoid future problems.	
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Describe any planned or proposed sampling activities or other surveys. (Scheduled EPD sampling can be found in the Basin Planning document.)

ORGANIZATION	TIME FRAME	PARAMETERS	PURPOSE	STATUS
EPD	2003-2004	Dissolved Oxygen	Basin planning	N/A
Mitchell County	2002	Dissolved Oxygen	Test for impairment	N/A

VII. CRITERIA TO DETERMINE WHETHER SUBSTANTIAL PROGRESS IS BEING MADE:

- % Concentration or load change (monitoring program)
- Categorical change in classification of the stream (delisting the stream is the goal)
- Regulatory controls or activities installed (ordinances, laws)
See Section II
- Best management practices installed (agricultural, forestry, urban)

COMMENTS

The following comments pertain to this plan revision.

After reviewing the aerial photography of Big Slough, surveying the area and utilizing RDC land use data, it should be noted that this area is primarily given over to agriculture, with farming, poultry and cattle production. 49 % of the available land is used for row crops and 24 % is used for silviculture.

. The open sink holes and thinly covered crevices in the Big Slough Watershed provide very little filtering of pollutants to the underground water supply. Sink holes are a natural occurrence in areas in which many of the geologic substrata are sedimentary, and in this case, primarily limestone. Erosion by subsoil water movements often create small caverns, their subsequent collapse then creates indentations at the surface which are commonly covered with a thinner layer of topsoil, which in turn limits their filtering actions. The ubiquity of these sink holes in the region makes an accurate count of them impossible.

There are a number of factors that can account for the low levels of Dissolved Oxygen present in Big Slough, not the least of which is the drought that preceded the initial testing itself. This drought not only helped boost levels of Sediment Oxygen Demand by creating heightened amounts of desiccated biota which flowed easily into the stream after even the smallest rainfall. Other factors include the high percentage of land within the

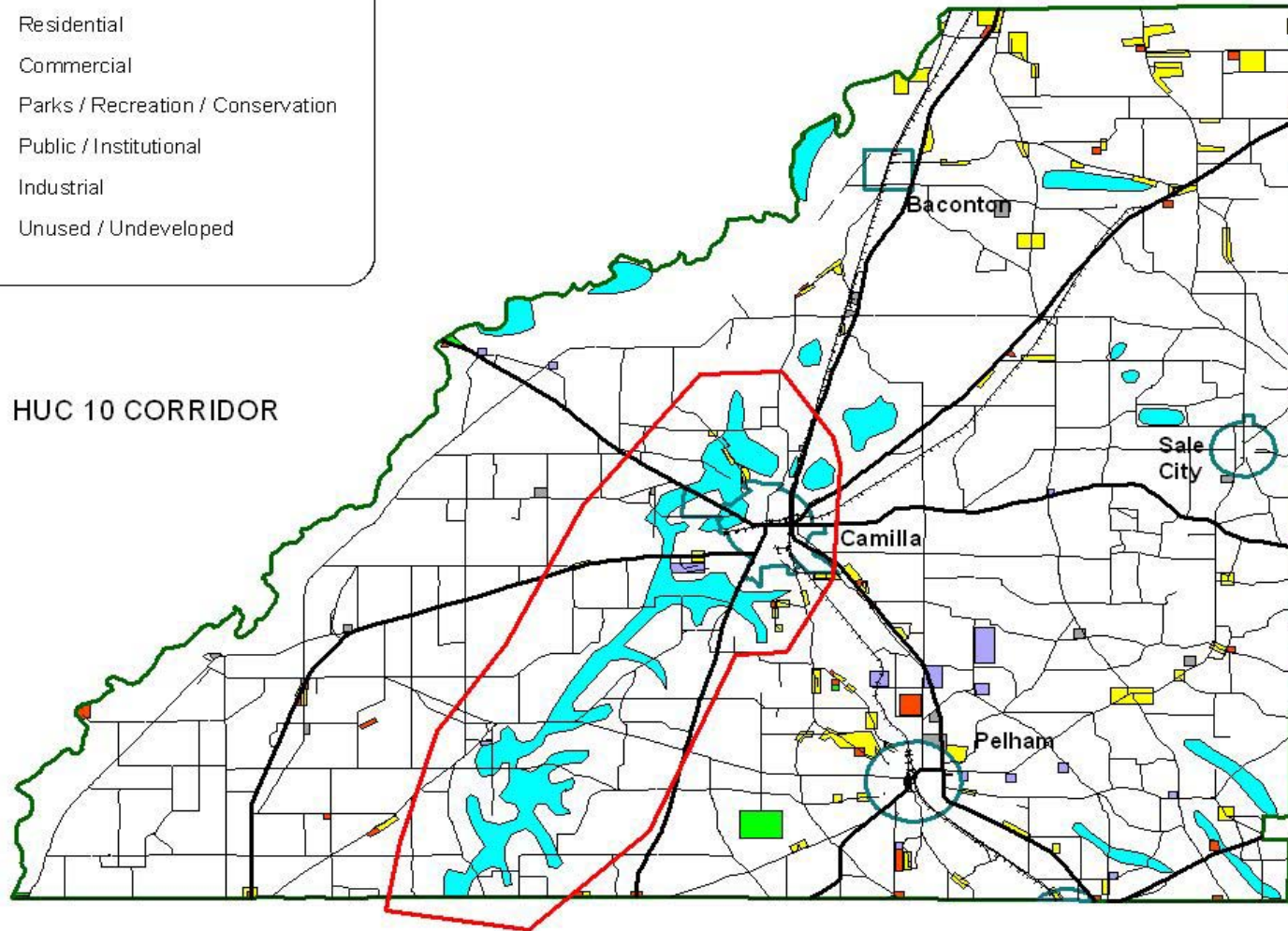
watershed given over to row crops and it's attendant high levels of run off, the relatively slow moving nature of the water in Big Slough and the strength of ambient temperatures.

EXISTING LAND USE

EXISTING LAND USE

- Residential
- Commercial
- Parks / Recreation / Conservation
- Public / Institutional
- Industrial
- Unused / Undeveloped

HUC 10 CORRIDOR



SOUTHWEST GEORGIA
REGIONAL DEVELOPMENT
CENTER

EXISTING LAND USE

**MITCHELL
COUNTY**